

Wrapped branes, consistent truncations and AdS/CMT

Branes wrapping calibrated cycles of special holonomy manifolds provide supersymmetric AdS solutions in String and M-theory. We show that, associated to those backgrounds, consistent truncations retaining massive modes, down to a lower dimensional matter-coupled supergravity theory with that AdS as its vacuum, can be performed. We discuss a particular AdS₄ example in M-theory and comment on the applications of the model to (3+1)-dimensional holographic superconductors and non-relativistic holography.

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